

SEQUENCE LISTING

<110> Gaiger, Alexander
Cheever, Martin A.

<120> COMPOSITIONS AND METHODS FOR WT1 SPECIFIC IMMUNOTHERAPY

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<140> US

<141> 1998-09-30

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<170> PatentIn Ver. 2.0

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Thr Gly Thr Ala Gly Ala Cys Arg Tyr
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Thr Gly Tyr Glu Ser Asp Asn His Thr
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Thr Leu Val Arg Ser Ala Ser Glu Thr
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Thr Pro Ile Leu Cys Gly Ala Gln Tyr

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Trp Thr Glu Gly Gln Ser Asn His Ser
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Tyr Gly His Thr Pro Ser His His Ala
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Tyr Pro Gly Cys Asn Lys Arg Tyr Phe
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Tyr Gln Met Thr Ser Gln Leu Glu Cys
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Tyr Arg Ile His Thr His Gly Val Phe
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Tyr Ser Ser Asp Asn Leu Tyr Gln Met
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Ala Glu Pro His Glu Glu Gln Cys Leu
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Ala Tyr Pro Gly Cys Asn Lys Arg Tyr
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Cys Met Thr Trp Asn Gln Met Asn Leu
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Cys Thr Gly Ser Gln Ala Leu Leu Leu
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Asp Gly Ala Pro Ser Tyr Gly His Thr
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Glu Ser Asp Asn His Thr Ala Pro Ile
1 5

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 His Thr His Gly Val Phe Arg Gly Ile
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Lys Arg Tyr Phe Lys Leu Ser His Leu

1

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Lys Thr Ser Glu Lys Pro Phe Ser Cys

1

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Leu Glu Cys Met Thr Trp Asn Gln Met

1

5

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Asn Gln Met Asn Leu Gly Ala Thr Leu
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<213> Mus musculus

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Pro Gly Ala Ser Ala Tyr Gly Ser Leu
1 5

<210> 288

<211> 9

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Gln Ala Ser Ser Gly Gln Ala Arg Met
1 5

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Gln Met Thr Ser Gln Leu Glu Cys Met
1 5

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Gln Gln Tyr Ser Val Pro Pro Pro Val
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Gln Tyr Arg Ile His Thr His Gly Val
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Gln Tyr Ser Val Pro Pro Pro Val Tyr
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Arg Met Phe Pro Asn Ala Pro Tyr Leu
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Thr Cys Gln Arg Lys Phe Ser Arg Ser
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1 5

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Thr Leu His Phe Ser Gly Gln Phe Thr
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Thr Leu Val Arg Ser Ala Ser Glu Thr
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Val Leu Asp Phe Ala Pro Pro Gly Ala

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5

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Trp Asn Gln Met Asn Leu Gly Ala Thr

1

5

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Tyr Phe Lys Leu Ser His Leu Gln Met

1

5

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Tyr Gln Met Thr Ser Gln Leu Glu Cys

1

5

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Tyr Ser Ser Asp Asn Leu Tyr Gln Met

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Gly Ala Ala Gln Trp Ala

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Ala Phe Thr Val His Phe Ser Gly Gln Phe Thr Gly Thr Ala Gly
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His Ala Ala Gln Phe
      1               5
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Cys His Thr Pro Thr Asp Ser Cys Thr Gly Ser Gln Ala Leu Leu Leu
1 5 10 15

Arg Thr Pro Tyr Ser Ser Asp Asn Leu Tyr Gln Met Thr Ser Gln Leu
20 25 30

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Arg Ile His Thr His Gly Val Phe Arg Gly Ile Gln Asp Val Arg Arg
1 5 10 15

Val Pro Gly Val Ala Pro Thr Leu Val Arg Ser Ala Ser Glu Thr Ser

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25

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 Gln Arg Lys Phe Ser Arg Ser Asp His Leu Lys Thr His Thr Arg Thr
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His Thr Gly Lys Thr Ser
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Met His Gln Arg Asn
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Ser Leu Gly Gly Gly Gly Gly Cys Ala Leu Pro Val Ser Gly Ala Ala
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Gln Trp Ala Pro Val Leu Asp Phe Ala Pro Pro Gly Ala Ser Ala Tyr
35 40 45

Gly Ser Leu Gly Gly Pro Ala Pro Pro Pro Ala Pro Pro Pro Pro Pro
50 55 60

Pro Pro Pro Pro His Ser Phe Ile Lys Gln Glu Pro Ser Trp Gly Gly
65 70 75 80

Ala Glu Pro His Glu Glu Gln Cys Leu Ser Ala Phe Thr Val His Phe
85 90 95

Ser Gly Gln Phe Thr Gly Thr Ala Gly Ala Cys Arg Tyr Gly Pro Phe
100 105 110

Gly Pro Pro Pro Pro Ser Gln Ala Ser Ser Gly Gln Ala Arg Met Phe
115 120 125

Pro Asn Ala Pro Tyr Leu Pro Ser Cys Leu Glu Ser Gln Pro Ala Ile
130 135 140

Arg Asn Gln Gly Tyr Ser Thr Val Thr Phe Asp Gly Thr Pro Ser Tyr
145 150 155 160

Gly His Thr Pro Ser His His Ala Ala Gln Phe Pro Asn His Ser Phe
165 170 175

Lys His Glu Asp Pro Met Gly Gln Gln Gly Ser Leu Gly Glu Gln Gln
180 185 190

Tyr Ser Val Pro Pro Pro Val Tyr Gly Cys His Thr Pro Thr Asp Ser
195 200 205

Cys Thr Gly Ser Gln Ala Leu Leu Leu Arg Thr Pro Tyr Ser Ser Asp
210 215 220

Asn Leu Tyr Gln Met Thr Ser Gln Leu Glu Cys Met Thr Trp Asn Gln
225 230 235 240

Met Asn Leu Gly Ala Thr Leu Lys Gly Val Ala Ala Gly Ser Ser Ser
245 250 255

Ser Val Lys Trp Thr Glu Gly Gln Ser Asn His Ser Thr Gly Tyr Glu
260 265 270

Ser Asp Asn His Thr Thr Pro Ile Leu Cys Gly Ala Gln Tyr Arg Ile

275 280 285
 His Thr His Gly Val Phe Arg Gly Ile Gln Asp Val Arg Arg Val Pro
 290 295 300
 Gly Val Ala Pro Thr Leu Val Arg Ser Ala Ser Glu Thr Ser Glu Lys
 305 310 315 320
 Arg Pro Phe Met Cys Ala Tyr Pro Gly Cys Asn Lys Arg Tyr Phe Lys
 325 330 335
 Leu Ser His Leu Gln Met His Ser Arg Lys His Thr Gly Glu Lys Pro
 340 345 350
 Tyr Gln Cys Asp Phe Lys Asp Cys Glu Arg Arg Phe Ser Arg Ser Asp
 355 360 365
 Gln Leu Lys Arg His Gln Arg Arg His Thr Gly Val Lys Pro Phe Gln
 370 375 380
 Cys Lys Thr Cys Gln Arg Lys Phe Ser Arg Ser Asp His Leu Lys Thr
 385 390 395 400
 His Thr Arg Thr His Thr Gly Lys Thr Ser Glu Lys Pro Phe Ser Cys
 405 410 415
 Arg Trp Pro Ser Cys Gln Lys Lys Phe Ala Arg Ser Asp Glu Leu Val
 420 425 430
 Arg His His Asn Met His Gln Arg Asn Met Thr Lys Leu Gln Leu Ala
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 Leu

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 1 5 10 15
 Ser Leu Gly Gly Gly Gly Gly Cys Gly Leu Pro Val Ser Gly Ala Ala
 20 25 30
 Gln Trp Ala Pro Val Leu Asp Phe Ala Pro Pro Gly Ala Ser Ala Tyr
 35 40 45
 Gly Ser Leu Gly Gly Pro Ala Pro Pro Pro Ala Pro Pro Pro Pro Pro
 50 55 60
 Pro Pro Pro Pro His Ser Phe Ile Lys Gln Glu Pro Ser Trp Gly Gly

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65	70	75	80
Ala Glu Pro His Glu Glu Gln Cys Leu Ser Ala Phe Thr Leu His Phe	85	90	95
Ser Gly Gln Phe Thr Gly Thr Ala Gly Ala Cys Arg Tyr Gly Pro Phe	100	105	110
Gly Pro Pro Pro Pro Ser Gln Ala Ser Ser Gly Gln Ala Arg Met Phe	115	120	125
Pro Asn Ala Pro Tyr Leu Pro Ser Cys Leu Glu Ser Gln Pro Thr Ile	130	135	140
Arg Asn Gln Gly Tyr Ser Thr Val Thr Phe Asp Gly Ala Pro Ser Tyr	145	150	155
Gly His Thr Pro Ser His His Ala Ala Gln Phe Pro Asn His Ser Phe	165	170	175
Lys His Glu Asp Pro Met Gly Gln Gln Gly Ser Leu Gly Glu Gln Gln	180	185	190
Tyr Ser Val Pro Pro Pro Val Tyr Gly Cys His Thr Pro Thr Asp Ser	195	200	205
Cys Thr Gly Ser Gln Ala Leu Leu Leu Arg Thr Pro Tyr Ser Ser Asp	210	215	220
Asn Leu Tyr Gln Met Thr Ser Gln Leu Glu Cys Met Thr Trp Asn Gln	225	230	235
Met Asn Leu Gly Ala Thr Leu Lys Gly Met Ala Ala Gly Ser Ser Ser	245	250	255
Ser Val Lys Trp Thr Glu Gly Gln Ser Asn His Gly Ile Gly Tyr Glu	260	265	270
Ser Asp Asn His Thr Ala Pro Ile Leu Cys Gly Ala Gln Tyr Arg Ile	275	280	285
His Thr His Gly Val Phe Arg Gly Ile Gln Asp Val Arg Arg Val Ser	290	295	300
Gly Val Ala Pro Thr Leu Val Arg Ser Ala Ser Glu Thr Ser Glu Lys	305	310	315
Arg Pro Phe Met Cys Ala Tyr Pro Gly Cys Asn Lys Arg Tyr Phe Lys	325	330	335
Leu Ser His Leu Gln Met His Ser Arg Lys His Thr Gly Glu Lys Pro	340	345	350
Tyr Gln Cys Asp Phe Lys Asp Cys Glu Arg Arg Phe Ser Arg Ser Asp	355	360	365

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Gln Leu Lys Arg His Gln Arg Arg His Thr Gly Val Lys Pro Phe Gln
 370 375 380

Cys Lys Thr Cys Gln Arg Lys Phe Ser Arg Ser Asp His Leu Lys Thr
 385 390 395 400

His Thr Arg Thr His Thr Gly Lys Thr Ser Glu Lys Pro Phe Ser Cys
 405 410 415

Arg Trp His Ser Cys Gln Lys Lys Phe Ala Arg Ser Asp Glu Leu Val
 420 425 430

Arg His His Asn Met His Gln Arg Asn Met Thr Lys Leu His Val Ala
 435 440 445

Leu